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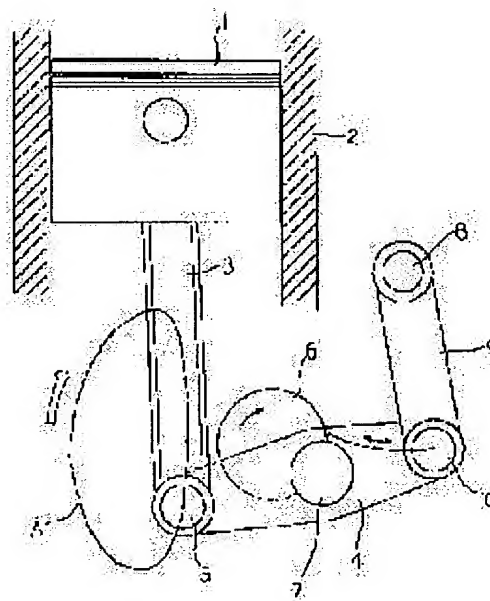
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54) RECIPROCATING ENGINE

57)Abstract:

ROBLEM TO BE SOLVED: To make the side thrust force of a piston small, and reduce friction force caused by a reciprocal movement by mounting a bridge to a crank shaft, connecting a connecting rod with one end of the bridge, and connecting the end of a rocking arm rocking around a stationary shaft with the other end.

OLUTION: One end part of a bridge 4 the center part of which is rotatably supported by the eccentric shaft 7 of a crank shaft 6, is connected 5 with the lower end part of a connecting rod 3 mounted to a piston 1 reciprocated within a cylinder 2, and the other end of the ridge 4 is connected 10 with a rocking arm 9 rocked around a shaft 8. The reciprocal movement of the piston 1 thereby allows the bridge 4 to be rocked through the movement of the connecting rod 3 and the rocking motion of the rocking arm 9, and also allows the crank shaft 6 to be thereby rotated. In this place, the locus A of the lower end shaft 5 of the connecting rod 3 is to describe roughly an ellipse shape, and side thrust force is prevented from being developed in the piston 1, so that sliding friction force against the cylinder 2 is thereby lessened.



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